

**Table 2.1-1****Chemical-Specific ARARs for Remedial Action at the Portland Harbor Superfund Site**

Portland Harbor Superfund Site

Portland, Oregon

Medium	Regulation/Citation	Criterion/Standard
Protection of surface water	Clean Water Act, 33 USC 1313 and 1314. Most recent 304(a) list, as updated up to issuance of the ROD	Under Section 304(a), minimum criteria are developed for water quality programs established by states. Two kinds of water quality criteria are developed: one for protection of human health, and one for protection of aquatic life.
Protection of potential drinking water sources	Safe Drinking Water Act, 42 USC 300f, 40 CFR Part 141, Subpart O, App. A. 40 CFR Part 143	Establishes Maximum Contaminant Level Goals (MCLGs) and Maximum Contaminant Levels (MCLs) to protect human health from contaminants in drinking water.
Measure of protectiveness of human health and the environment in all media	Oregon Environmental Cleanup Law ORS 465.315(b)(A). Oregon Hazardous Substance Remedial Action Rules OAR 340- 122-0040(2)(a) and (c), 0115(2-4).	Sets standards for degree of cleanup required for hazardous substances. Establishes acceptable risk levels for human health at $1 \times 10^{-6}$ for individual carcinogens, $1 \times 10^{-5}$ for multiple carcinogens, and Hazard Index of 1 for noncarcinogens.
Protection of surface water	Water Pollution Control Act ORS 468B.048. Numeric water quality criteria set forth in OAR Part 340, Division 41, in particular Toxic Substances criterion at OAR Part 340-41-0033 (Tables 30 and 40), and Designated Uses for the Willamette Basin and Numeric Water Quality Criteria specified for the Willamette Basin at OAR 340-041-340 and 340-041-0345	DEQ is authorized to administer and enforce CWA program in Oregon. DEQ rules designate beneficial uses for water bodies and narrative and numeric water quality criteria necessary to protect those uses.

Comments
<p>Relevant and appropriate for cleanup standards for surface water and contaminated groundwater discharging to surface water if more stringent than promulgated state criteria. Relevant and Appropriate to short-term impacts from dredging and capping if more stringent than promulgated state criteria. Relevant and Appropriate as criterion to apply to point source discharges used</p>
<p>Relevant and Appropriate as cleanup standards for groundwater and surface water at Portland Harbor, which are potential drinking water sources.</p>
<p>The final selected remedy will achieve these applicable human health carcinogen and noncarcinogen risk levels by implementation of dredging, capping, enhanced natural recovery, monitored natural recovery, on or off-site disposal, implementation of institutional controls and other response actions set forth in the ROD.</p>
<p>Oregon's numeric toxics water quality standards (Tables 30 and 40) are applicable requirements as cleanup standards for surface water to the extent they are more stringent than Clean Water Act 304(a) recommended criterion. All numeric water quality criteria are applicable standards of control for implementation of remedial actions occurring in waters of the state.</p>

**Table 2.1.2**  
**Action-Specific ARMs for Remedial Action at the Portland Harbor Superfund Site**  
Portland, Oregon

Action	Regulatory/Citation	Criterion/Standard	Comments
Actions that are designed to prevent or reduce the discharge of dredged and fill material into navigable waters	Clean Water Act, Section 402 and Section 405(b)(1) Guidelines, 33 USC 1344, 40 CFR Part 230	Prohibits discharges of dredged and fill material into navigable waters of the United States and sets criteria for compensatory mitigation for unavoidable impacts to waters of the US from required actions taken	Applicable for selecting a water disposal site and for evaluating impacts and mitigation for impacts from dredging, cutting, capping, and pile-driving activities for the designation, construction and monitoring of in-water disposal sites and in-water filling activities in the Willamette River.
Actions that discharge pollutants to waters of U.S.	Clean Water Act, Section 402, 33 USC 1342	Requires discharges of pollutants from point sources to waters of the U.S., and requires compliance with the standards, limitations and regulations promulgated per Sections 301, 303, 305, 307, 308 of the CWA.	Relevant and Appropriate to remedial actions that result in a point source discharge of pollutants to the river if more stringent than state promulgated point source requirements.
Actions that discharge pollutants to waters of U.S.	Clean Water Act, Section 403, 33 USC 1343, 40 CFR Section, 121.24(a)(3), (4) and (5)	Prohibits discharge of pollutants from any point source into navigable waters requires reasonable assurance that the action will comply with applicable provisions of sections 1303, 1303, 1308, and 1317 of the Clean Water Act.	Relevant and Appropriate to remedial actions that require state implementation regulations, that in-water disposal activities to reduce water quality standards, and other requirements on the discharge of pollutants to navigable waters.
Actions resulting in discharges to waters of the State of Oregon, including removal and fill activities	Water Pollution Control Act ORS 468B-080. Designated Beneficial Uses, Numerical and Narrative Water Quality Standards set forth in either State-wide or specific to the Willamette Basin in OAR Part 340, Division 41	Any activity which may result in any discharge into waters of the State must meet Oregon Water Quality Standards.	Relevant and Appropriate to remedial actions that require state implementation regulations, that in-water disposal activities to reduce water quality standards, and other requirements on the discharge of pollutants to navigable waters.
Actions resulting in discharges to waters of the State of Oregon, including removal and fill activities	Compliance with Water Quality Requirements and Standards ORS 468B-020, OAR 340-041, 340-042, 340-048	Provides that federally approved activities that may result in a discharge to waters of the State require evaluation whether an activity may proceed and meet water quality standards with conditions, which if met, will ensure that water quality standards are met.	Applicable to implementation of the remedial action (e.g., dredging, capping, and construction of confined disposal facility) that may result in a discharge to waters of the State and requires reasonable assurance that water quality standards will be complied with and requires conditions and other requirements deemed necessary by plan on the discharge.
Actions resulting in discharges to waters of the State of Oregon, including removal and fill activities	ORS 196.820(2). Statutory requirement to require mitigation. Implementing rules OAR 340-080-010, 340-080-080, 340-080-085, 340-080-090, 340-080-095	Substantive requirements for mitigation for the reasonably expected adverse effects of removal or fill in a project development in waters of the state, including or designating Potential Indigenous Anadromous Salmonid Habitat.	Applicable compensatory mitigation standards and requirements for impacts from dredge and fill activities, dredging, and reachway remediation.
Actions in federal navigation channels	River and Harbor Act, Section 10, 33 USC Section 403, 33 CFR Section 322.04, 33 CFR Section 322.3 and Section 322.4(a) and (c).	The creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States is prohibited, and it shall not be lawful to build or to commence the building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structure in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, which established harbor line. Placing of aids to navigation in navigable waters is under the purview of Section 10, and must meet requirements of the U.S. Coast Guard (33 CFR 320.04(a)(2) See 33 CFR 322.04). Any discharge of dredged or fill material contains any toxic pollutant listed under section 307 of the CWA such discharge shall require compliance with Section 404 of the CWA. See 33 CFR Section 321.4(b). Placement of pilings, or discharge of dredged material that where the flow or circulation of waters of the United States may be impaired or the result of such waters reduced must comply with Section 10.	Applicable requirement for how remedial actions are taken or constructed in the navigation channel. Applicable to the use of aids to navigation to institutional controls for maintaining the integrity of the selected remedy or placement of pilings or discharge of dredged material that may impair the flow or circulation of waters or reach of such waters.
Actions resulting in the dredging and on-site disposal of dredged material that may be hazardous waste	Resource Conservation and Recovery Act, 40 CFR Part 268	Establishes identification standards for hazardous waste and provides a qualified exemption from the definition of hazardous waste for dredged material. Hazardous waste is handled in accordance with the requirements of a Section 404 permit (40 CFR 261.46).	Relevant and Appropriate to characterizing contaminated media or hazardous waste generated from the action and designated for either on-site or off-site disposal, potentially relevant and appropriate for use in identifying acceptance criteria for confined in-water disposal.
On-site upland treatment, storage or disposal of hazardous waste	Resource Conservation and Recovery Act, 40 CFR Part 268	Management standards including mobile handling, requirements for particular units such as tanks or containers, and other requirements applicable to owners and operators of hazardous waste treatment, storage and disposal facilities.	Relevant and Appropriate to remedial actions that involve treatment, storage, or disposal of hazardous waste on-site and in the uplands portion of the site.
On-site upland placement and disposal of hazardous waste	Resource Conservation and Recovery Act, 40 CFR 268	Permit land disposal restrictions, including treatment standards and related testing requirements on hazardous waste.	Relevant and Appropriate to hazardous waste listed or characteristic generated from remedial actions and disposed of at an upland on-site disposal facility.
On-site disposal of sludge and remedial waste or upland dredged material	RCRA - Solid Waste, 40 CFR 257 Subpart A	Establishes criteria for determining which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health or the environment.	RCRA Solid Waste requirements may be relevant and appropriate to remedial actions that result in upland on-site disposal of dredged material. Requirements for the management of solid waste facilities may be relevant and appropriate to upland disposal.
Island and in-water disposal of dredge material	Hazardous Materials Transportation Act, 49 USC §10101 et seq, 40 CFR Part 173.127	Establishes requirements for acceptance and transportation of hazardous materials by private, common, or contract carriers by motor vehicle.	Relevant and Appropriate to in-site transport of hazardous materials.
Actions generating hazardous waste	Hazardous Waste and Hazardous Materials Act, 49 USC 16001-16017, OAR 340-320-0011. Hazardous Waste Identification	Defines "hazardous waste" and the rule contains the criteria by which anyone generating media must determine if that media is a hazardous waste.	Applicable to characterizing contaminated media as hazardous waste generated from the action and designated for either on-site or off-site disposal, potentially relevant and appropriate for use in identifying acceptance criteria for confined in-water disposal.
On-site treatment, storage, disposal of hazardous waste	Hazardous Waste and Hazardous Materials Act, Identification and Listing of Hazardous Waste, 40 CFR 261.46	Identifies additional materials that are subject to regulation as hazardous waste under state law.	Specific requirements if remedial action will involve on-site treatment, disposal, or storage of additional listed wastes.
On-site treatment, storage, disposal of hazardous waste	Solid Waste General Provisions, ORS 468B-020, OAR 340-041, 340-042, 340-048	Substantive Requirements for the location, design, construction, operation, and closure of solid waste management facilities.	Applicable if upland disposal facility contemplated on-site solid waste, non-hazardous waste disposal, handling, treatment, or transfer (Note off-site transfer, treatment, handling, or disposal subject to all administrative and substantive state requirements.) (see previous comment)
On-site treatment, storage, disposal of non-hazardous waste	Solid Waste Land Disposal Site Other than Municipal Solid Waste Landfills, 40 CFR 268.10, OAR 340-041, 340-042, 340-048	Requirements for the management of solid wastes at land disposal sites other than municipal solid waste landfills.	Applicable to the on-site management and disposal of contaminated sediment, soil, and/or groundwater.
Actions handling PCB remediation wastes and PCB containing materials	Clean Substances Control Act, 25 USC 1051 et seq, 40 CFR Part 762.05-762.79	Establishes requirements for handling, storage, and disposal of PCB-containing materials, including PCB remediation wastes, and with performance standards for disposal technologies for materials/wastes with concentrations in excess of 50 mg/kg. Establishes decontamination standards for PCB contaminated debris.	RCRA requirements may be applicable to the on-site handling, storage and disposal of contaminated sediment, debris, or surface water with PCB contamination.
Risk-based limits protective of human health for air emissions associated with soil or sediment removal	Clean Air Act, 40 CFR Parts 52 and 53	Air emissions from stationary and mobile sources that may be generated that create threats to human health as defined in the regulations.	Relevant and Appropriate to remedial activities that generate air emissions (soils only listed)
Actions generating air emissions	Clean Air Act, 40 CFR Part 52 and 53	ORCA is authorized to administer and enforce Clean Air Act, General Emissions Standards, 40 CFR 52.02	Applicable to remedial actions taking place in on-site projects. Could apply to earth-moving equipment, dust from vehicle traffic, and mobile source exhaust, among other things.
Actions generating air emissions	Airborne Emissions Requirements OAR 340-028	Applies to any burning, processing or storage of materials, or use of a tank, or any equipment to be operated, without taking measures to prevent particulate matter from becoming airborne. These rules for "special control areas" or other areas where fugitive emissions may cause nuisance and control measures are practicable.	Applicable to remedial actions taking place in on-site projects. Could apply to earth-moving equipment, dust from vehicle traffic, and mobile source exhaust, among other things.
Actions generating air emissions	Fish and Wildlife Coordination Act, 16 USC 662, 50 USC 3605(a)	Requires Federal agencies to consider effects on fish and wildlife from projects that may alter a body of water and mitigate or compensate for project-related losses, which include the destruction of habitat.	Potentially applicable to determining impacts and appropriate mitigation, if necessary, for effects on fish and wildlife from filling activities or discharges from point sources.
Actions that may affect ESA listed and State protected fish and wildlife species	CCFPA Fish Management Plan for the Willamette River, OAR 635, div. 300	Provides basis for in-water work (dredging and filling) within the Willamette River.	Potentially applicable to planning restrictions on when dredging and filling can occur in the Willamette River due to presence of ESA listed and state protected species at the site.
Actions that may affect marine mammals	Marine Mammal Protection Act, 16 USC §1461 et seq, 50 CFR 216	Imposes restrictions on the taking, possession, transportation, selling, offering for sale, and importation of marine mammals.	Potentially applicable to response actions that may cause harm marine mammals in the Willamette River and may construction plans require best management practices for observing and avoiding contact with such species.
Actions that may affect migratory birds	Migratory Bird Treaty Act, 16 USC §703, 50 CFR 10.12	Makes it unlawful to take any migratory bird. "Take" is defined as pursuing, hunting, wounding, killing, capturing, trapping and collecting.	Potentially applicable to response actions that may cause harm migratory birds using the Willamette River and may require that construction plans use best management practices for observing and avoiding contact with such species.
On-site actions that involve handling and disposal of dredged material	OAR 340-030-0003 through -0002	Oregon adopted the federal Hazardous Waste Identification Rule that provides for an action for dredged materials subject to the requirements of a permit under the Clean Water Act in the Marine Protection, Research, and Assessment Act from RCRA Section C.	Applicable to handling and on-site disposal of dredged materials managed solely as on-site disposal facility subject to the requirements of a permit under the Clean Water Act or Marine Protection, Research, and Assessment Act.

**Table 2.1-3**  
**Location-Specific ARARs for Remedial Action at the Portland Harbor Superfund Site**  
Portland Harbor Superfund Site  
Portland, Oregon

Location	Regulation/Citation	Criterion/Standard	Comments
Presence of archaeologically or historically sensitive area	Native American Graves Protection and Repatriation Act, 25 USC 3001-3013, 43 CFR 10	Requires Federal agencies and museums which have possession of or control over Native American cultural items (including human remains, associated and unassociated funerary items, sacred objects and objects of cultural patrimony) to compile an inventory of such items. Prescribes when such Federal agencies and museums must return Native American cultural items. "Museums" are defined as any institution or State or local government agency that receives Federal funds and has possession of, or control over, Native American cultural items.	If Native American cultural items are present on property belonging to the Oregon Division of State Lands (DSL) that is a part of the response action area, this requirement is potentially applicable. If Native American cultural items are collected by an entity which is either a federal agency or museum, then the requirements of the law are potentially applicable.
Presence of archaeologically or historically sensitive area	Indian Graves and Protected Objects ORS 97.740-760	Prohibits willful removal of cairn, burial, human remains, funerary object, sacred object or object of cultural patrimony. Provides for re-interment of human remains or funerary objects under the supervision of the appropriate Indian tribe. Proposed excavation by a professional archaeologist of a native Indian cairn or burial requires written notification to the State Historic Preservation Officer and prior written consent of the appropriate Indian tribe. Prohibits persons from excavating, injuring, destroying or damaging archaeological sites or objects on public or private lands unless authorized.	Potentially relevant and appropriate if archaeological material is encountered.
Presence of archaeologically or historically sensitive area	Archaeological Objects and Sites ORS 358.905- 955 ORS 390.235	Imposes conditions for excavation or removal of archaeological or historical materials.	Potentially relevant and appropriate if archaeological material encountered.
Presence of archaeologically or historically sensitive area	National Historic Preservation Act. 16 USC 470 et seq. 36 CFR Part 800	Requires the identification of historic properties potentially affected by the agency undertaking, and assessment of the effects on the historic property and seek ways to avoid, minimize or mitigate such effects. Historic property is any district, site, building, structure, or object included in or eligible for the National Register of Historic Places, including artifacts, records, and material remains related to such a property.	Potentially applicable if historic properties are potentially affected by remedial activities.
Presence of archaeologically or historically sensitive area	Archaeological and Historic Preservation Act. 16 USC 469a-1	Provides for the preservation of historical and archaeological data that may be irreparably lost as a result of a federally-approved project and mandates only preservation of the data.	Potentially applicable if historical and archaeological data may be irreparably lost by implementation of the remedial activities.
Presence of floodplain as designated on FEMA Flood Insurance map	44 CFR 60.3(d)(2) and (3)	Prohibits encroachments that would result in any increase in flood levels during occurrence of base flood discharge.	FEMA flood rise requirements are considered relevant and appropriate requirements for remedial actions.
Presence of floodplain as designated on map	Federal Emergency Management Act regulations at 44 CFR 9 (which sets forth the policy, procedure and responsibilities to implement and enforce Executive Orders 11988 (Management of Floodplain) <b>To Be Considered</b> , as amended by E.O. 13690 and 11990 (Protection of Wetlands) <b>To Be Considered</b>	Requirements for Flood Plain Management Regulations Areas Requires measures to reduce the risk of flood loss, minimize impact of floods, and restore and preserve the natural and beneficial values of floodplains.	Relevant and appropriate for assessing impacts, if any, to the floodplain and flood storage from the response action and developing compensatory mitigation that is beneficial to floodplain values.
Presence of wetlands	Executive Order for Wetlands Protection. Executive Order 11990 (1977) <b>To Be Considered</b>	Requires measures to avoid adversely impacting wetlands whenever possible, minimize wetland destruction, and preserve the value of wetlands.	Relevant and appropriate in assessing impacts to wetlands, if any, from the response action and for developing appropriate compensatory mitigation for the project.
Presence of state-listed threatened or endangered wildlife species	Protection and Conservation Programs ORS. 496.171 to 496.182. Survival Guidelines OAR 635-100-0135	Survival Guidelines are rules for state agency actions affecting species listed under Oregon's Threatened or Endangered Wildlife Species law.	Substantive requirements of Survival Guidelines relevant and appropriate to remedial activities affecting state-listed species.
Presence of essential fish habitat	Magnuson-Stevens Fishery Conservation and Management Act. 50 CFR Part.600.920	Evaluation of impacts to Essential Fish Habitat (EFH) is necessary for activities that may adversely affect EFH.	Potentially applicable if the removal action may adversely affect EFH.
Presence of federally endangered or threatened species	Endangered Species Act. 16 USC 1536 (a)(2). Listing of endangered or threatened species per 50 CFR 17.11 and 17.12 or designation of critical habitat of such species listed in 50 CFR 17.95	Actions authorized, funded, or carried out by federal agencies may not jeopardize the continued existence of endangered or threatened species or result in the adverse modification of species' critical habitat. Agencies are to avoid jeopardy or take appropriate mitigation measures to avoid jeopardy.	Applicable to remedial actions that may adversely impact endangered or threatened species or critical habitat that are present at the site.